

# Compact Multi-pole SPD SafeBloc B(R) 50 (3+1) TCG

Class I • Class II • Type 1 • Type 2

12.5 kA Series



Location of Use: Main Distribution Boards  
 Network Systems: TT  
 Mode of Protection: L-N, N-PE  
 Surge Ratings:  $I_{imp} = 12.5 \text{ kA} / 50 \text{ kA} (10/350 \mu\text{s})$   
 $I_n = 20 \text{ kA} / 50 \text{ kA} (8/20 \mu\text{s})$   
 IEC/EN Category: Class I, II / Type 1, 2  
 Protective Elements: High Energy MOV and GDT  
 Safety: High TOV Immunity  
 Leakage Current: NO Leakage Current  
 Housing: Compact Design  
 Compliance: IEC 61643-11:2011  
 EN 61643-11:2012

## Technical Data

SafeBloc B(R) 50/xxx (3+1) TCG

275

### Electrical

Nominal AC Voltage (50/60 Hz)	$U_o$	230V
Maximum Continuous Operating Voltage (AC)	(L-N) $U_c$	275V
	(N-PE) $U_c$	255V
Nominal Discharge Current (8/20 $\mu\text{s}$ )	(L-N)/(N-PE) $I_n$	20 kA/50 kA
Maximum Discharge Current (8/20 $\mu\text{s}$ )	(L-N)/(N-PE) $I_{max}$	50 kA/100 kA
Impulse Discharge Current (10/350 $\mu\text{s}$ )	(L-N)/(N-PE) $I_{imp}$	12.5 kA/50 kA
Total Discharge Current (10/350 $\mu\text{s}$ )	$I_{total}$	50 kA
Specific Energy	(L-N)/(N-PE) W/R	39 kJ/ $\Omega$ /625 kJ/ $\Omega$
Charge	(L-N)/(N-PE) Q	6.25 As/25 As
Voltage Protection Level	(L-N)/(N-PE) $U_p$	< 1.5 kV / < 1.5 kV
Follow Current Interrupt Rating	(N-PE) $I_{fi}$	100 A <sub>RMS</sub>
Response Time	(L-N)/(N-PE) $t_A$	< 25 ns / < 100 ns
Back-Up Fuse (if mains > 250 A)		250 A gG
Short-Circuit Current Rating (AC)	$I_{SCCR}$	50 kA
TOV withstand 5s	(L-N) $U_T$	438V
TOV withstand 200ms	(N-PE) $U_T$	1200V/300A
Number of Ports		1

### Mechanical & Environmental

Temperature Range	$T_a$	-40 °C to +85 °C
Permissible Humidity	RH	5%...95%
Terminal Screw Torque	$M_{max}$	3.0 Nm
Conductor Cross Section (max)		35 mm <sup>2</sup> (solid) / 25 mm <sup>2</sup> (stranded)
Mounting		35 mm DIN Rail, EN 60715
Degree of Protection		IP 20
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0
Thermal Protection	(L-N)/(N-PE)	Yes/No
Fault Indication	(L-N)/(N-PE)	Red Flag/NO
Remote Contacts (RC)		Optional
RC Switching Capacity		AC: 250V/0.5A; 125V/3A
RC Terminal Cross Section (max)		1.5 mm <sup>2</sup>
RC Terminal Screw Torque	$M_{max}$	0.25 Nm

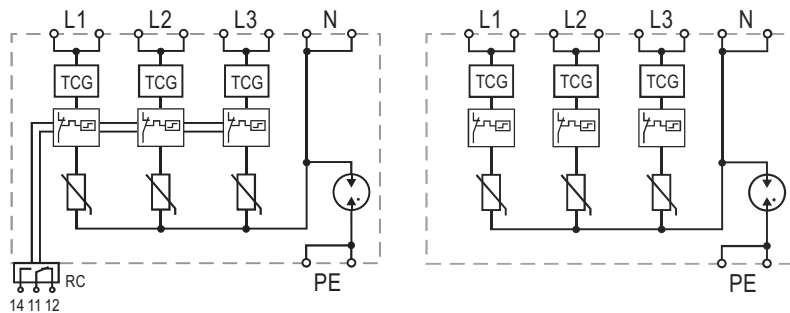
### Order Information

Order Code	275
SAFELOC B 50/xxx (3+1) TCG	54.0533
SAFELOC B(R) 50/xxx (3+1) TCG (with remote contacts)	54.0534

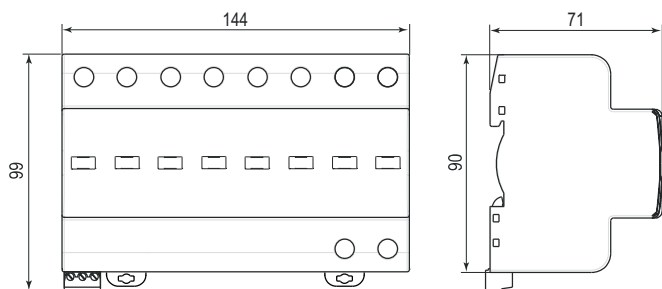
**Internal Configuration**

**Legend**

- L Line
- N Neutral
- PE Protective Earth
- RC Remote Contacts Optional
- TCG Thermal Control Function with No Leakage



**Dimensions & Packaging [mm]**



Dimensions & Packaging	
<b>SafeBloc B 50/xxx (3+1) TCG</b>	<b>275</b>
Single Unit Weight	900g
Single Unit DIN 43880 Dimension	8 TE
Packaging Dimensions (H × W × L)	109 × 77 × 148mm
Minimum Order Quantity	2 Units
<b>SafeBloc BR 50/xxx (3+1) TCG</b>	<b>275</b>
Single Unit Weight	910g
Single Unit DIN 43880 Dimension	8 TE
Packaging Dimensions (H × W × L)	109 × 77 × 148mm
Minimum Order Quantity	2 Units

Applicable connection configurations can be found on page 55.